# KNOWLEDGE AND ACTION FOR SYSTEM TRANSFORMATION (KAST)

A Systematic Realist Review and Evidence Synthesis of the Role of Government Policy in Coordinating Large System Transformation

# FINAL REPORT

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# Executive Summary

## Introduction

The Saskatchewan Ministry of Health has a mandate to coordinate a considerable transformation of the provincial health system. In support of that mandate, the Ministry has undertaken four significant initiatives in the areas of Patient and Family Centred Care, Primary Health Care Improvement, Lean for healthcare, and the Saskatchewan Surgical Initiative. The latter three are viewed as supporting the goals and objectives of the Patient and Family Centred Care initiative. However, to date, each initiative has been substantially isolated from the others, which has limited the application of lessons learned from one area to another, as well as the leveraging of resources toward common goals and objectives.

The purpose of this project was to conduct a systematic realist review and synthesis. In order to maximize the utility of this report, its focus is on evidence extracted from both the published literature and current practice regarding Large System Transformation generally. While literature on large system transformation at the macro level is fairly limited, several overarching themes emerged. These themes were captured as evidence statements derived from the literature by the research synthesis team, and were then validated and modified by the project's international Expert Panel as well as a larger Consensus Network of international experts. Each evidence statement is accompanied by descriptions of the contextual factors and mechanisms that are important for successful achievement of transformation, in decreasing order of importance as identified by the Expert Panel and the Consensus Network. All evidence statements, contextual factors, and mechanisms received a very high level of endorsement by the expert bodies that were consulted.

An additional focus of this report is the role of government, and how a government agency (or Ministry) can facilitate, support, and create the contextual factors and mechanisms that are critical for success and sustainability of large system transformation efforts. Recommendations to this end are included throughout the report, and were drawn both from the published evidence, as well as from the Expert Panel and Network respondents.

## *Evidence Statement 1: Large system transformation in health care systems requires both top-down leadership that is passionately committed to change, as well as distributed leadership and engagement of personnel at all levels of the system.*

### Contextual Factors

1. Mission, vision, and strategies that set the system's direction and priorities (clearly laid out and known by everyone at all levels of the system) (*Going Lean in Health Care*, 2005; Harrison & Kimani, 2009; Lukas, et al., 2007).
2. Informal values and norms of the system. According to the Institute for Healthcare Improvement, "an organization's culture is the set of values and beliefs that cause people to behave in certain ways" (p. 5). By allowing people to behave differently, they can experience a

better set of results, which will result in the creation of a new culture (*Going Lean in Health Care*, 2005).

3. Human resources capacity (Harrison & Kimani, 2009), developed specifically for undertaking the transformation initiatives proposed.
4. Politics, policy mandates, and governmental initiatives, described by Harrison & Kimani as "external conditions" that can create pressures for change (2009). (see also Lukas, et al., 2007)
5. Degree of integration of the system (the more tightly woven/integrated, the easier it is to implement system-wide change; the larger and more complex the system, the more difficult alignment of goals across the system can be).
6. Amount and consistency of funding for change initiatives over time

## Mechanisms

1. Alignment of vision and goals to achieve consistency of these with resource allocation and actions at all levels of the system, including integration to bridge intra-organizational boundaries (Lukas, et al., 2007).
2. Active management of the change strategy, perhaps through dedication of a change agent(s) - one or more individuals dedicated solely to managing the process of change (Chreim, Williams, Janz, & Dastmalchian, 2010; Harrison & Kimani, 2009)
3. Small team projects (pilot projects) that demonstrate success and can be scaled up to larger system change (Brown & Duthe, 2009; Caldwell, Chatman, O'Reilly, Ormiston, & Lapiz, 2008; Harrison & Kimani, 2009; Lukas, et al., 2007; McGrath, et al., 2008)
4. Assurance that actions taken as part of change strategy implementation will not be penalized (*Going Lean in Health Care*, 2005; Small & Barach, 2002).

## Recommendations for government action

- Lukas et al conclude that meso-level (or even micro-level) change initiatives can lead to macro-level system transformation. Government should focus on ways it can support those meso- and micro-level changes through policy, resource allocation, etc.
- Facilitate communication and visibility of the transformation efforts, both internally and externally, by working with those who have a history of showing leadership in this area.
- Clearly articulate the goals of the initiative, ensure strategies are aligned with the vision, and provide adequate resources and time to get the job done (provide both the external pressure and the internal resources for successful transformation)
- Provide a central coordinating body for the change initiative(s), insulated as much as possible from political influence and change, and engaging broad representation or consultation from all stakeholder groups.
- Provide a guiding and coordinating role, not a dictating role. Be flexible. Specify outcomes and provide resources, but do not dictate HOW the work is to be done.
- Demonstrate the political will to push for objectives or strategies that may not be unanimously popular. Ensure that strategies proposed are evidence-based.

## *Evidence Statement 2: Measurement and reporting on progress toward short and long-term goals is critical for achieving effective and sustainable large system transformation.*

### Contextual Factors

1. Infrastructure and system leadership commitment to reporting measurements throughout the system (in all cases) and beyond the system (in cases where such distribution would support the goals of the transformation)(Loftus, 2010)
2. Information technology infrastructure capable of enabling reporting of key indicators (primarily an electronic patient record/medical record) (Brokel & Harrison, 2009; Brown & Duthe, 2009).

### Mechanisms

1. Consistency and transparency regarding definitions, calculations and reporting mechanisms - clarity around "what the numbers mean" when they are reported (Stoop, Vrangbaek, & Berg, 2005).
2. Selection and agreement of measures that accurately capture that which is intended to be measured. (e.g., identifying clear measures of "patient-centredness") (Boudreaux, Cruz, & Baumann, 2006; Burstrom, 2009; Conway, et al., 2006).
3. Engagement of all (relevant) stakeholder groups to determine which measurements will be selected and reported. Adequate representation is critical in order to avoid selecting measures that will influence behaviours in negative unintended ways.
4. Processes are developed and embedded for regular internal review of selected measures, which includes reviewing outcomes from small pilot projects for revision and improvement of subsequent efforts
5. Inclusion of incentives for (or penalties for not) acting on feedback from reported measures (including patient feedback); these must be sustained and systemic rather than one-time or short-term, but their impact on behaviour must be clearly understood to avoid gaming of the system.
6. Integration/standardization of measures throughout the system, including primary care practitioners, specialists, chronic care, prevention, administration, etc.

### Recommendations for government action

- Provide resources and infrastructure for measurement including IT systems for collecting and reporting on measures, funding for infrastructure development, and funding for work it takes to collect the data for the measures.
- Facilitate development of measures through engagement of stakeholders, and establishing links between the transformation vision and the measures.
- Establish independent oversight of both measurement development and measurement reporting and interpretation. This will make it possible both to measure things that some stakeholder groups do not want measured but which are critical for the transformation effort, and to report on results of the measurement which may shine lights on elements of the system that are blocking change and are critical for transformation success. Partnering with non-

government research scientists and organizations or the Health Quality Council may be a good strategy for this.

- Offer equitably distributed rewards and sanctions for the measures, but not until the impact of those rewards and sanctions are understood. Provide a process for changing the measures if they are shown to have unintended consequences or encourage gaming of the system.

## *Evidence Statement 3: Consideration and acknowledgement of historical context will help avoid unnecessary pitfalls, and increase buy-in and support from system stakeholders.*

### Contextual Factors

1. Interest and awareness on the part of change leaders with respect to the history of past change efforts
2. Existence and availability of historical accounts, both personal and documentary, of past systems change initiatives (Harrison & Kimani, 2009)

### Mechanisms

1. Explicit attention to and acknowledgement of past change efforts and outcomes in the internal and external framing of current change efforts (Harrison & Kimani, 2009). In their review of system redesign at Denver Health, Harrison and Kimani concluded that "grounding the redesign's vision and change strategy in familiar ideas and activities reduced the likelihood of resistance by stakeholders loyal to DH's past" (2009, p. 46). In addition, they concluded that "system changes are more likely to succeed when they are mutually reinforcing and well aligned with pre-existing system features" (2009, p. 52).
2. Education of key leadership throughout the system of previous change efforts and their outcomes, contextual factors and mechanisms that were influential in past efforts for change, and the relationships between past efforts and current efforts

### Recommendations for government action

- Carefully assess organizational readiness for transformation and develop resources, system capabilities, and external relations capable of supporting proposed changes. System resources and capabilities should be developed sequentially over time (Harrison & Kimani, 2009).
- Store and report information about past change efforts, including (and especially?) efforts that were unsuccessful.
    - Provide guidance, funding, and technical assistance to facilitate organizations' efforts to document and report on historical activities, including the commission of evaluations. Establish formal (normative) recognition of the importance of these reports.
    - Provide storage for and access to historical knowledge, especially qualitative assessments. Include contact names for key personnel in transformation efforts for consultation later.

    - Gather historical narratives from other sources (contexts) for reference, and develop syntheses or briefs on the current and historical examples of change that are relevant framed for an audience of political decision-makers.
    - Provide a forum for sharing information and lessons learned across jurisdictions (provinces).
- Recognize that while history is important (whether successful or not), it should be used as a tool for moving things forward rather than as a barrier to getting things done. Include in any synthesis of past efforts an analysis of the relevance of each to the current context. Technology, ideology, and environment may have all changed in the interim and must be taken into consideration when assessing how past efforts can be used to plan for current ones.

## *Evidence Statement 4: Large system transformation in health care systems relies on significant physician engagement in the change process*

While the evidence provides a strong rationale for focusing on physicians, there was a strong reaction from the Consensus Network respondents to this focus. There seemed to be a general consensus among respondents that while physicians cannot be focused on to the exclusion of other types of professionals, they must be engaged. Because of their historical reluctance to engage in and be supportive of change efforts, the evidence statement highlights their importance.

### Contextual Factors

1. Relationship of physicians to other care providers institutionally, historically, politically, and individually (Kirkpatrick, Jespersen, Dent, & Neogy, 2009; McDonald, Harrison, & Checkland, 2008)
2. Relationship between and among such physician organizations, health care systems, and governmental agencies (Hasselbladh & Bejerot, 2007)
3. History of previous attempts to effect change and physician response to those attempts (Kirkpatrick, et al., 2009)
4. Strong licensing and regulatory bodies (e.g. Colleges of Physicians) that have responsibility for monitoring quality, enacting disciplinary measures and certifying competence (Grol, 2006).

### Mechanisms

1. Implementation of a quality assurance framework, that monitors key quality indicators and is linked to incentives, professional development and re-certification, and ultimately, disciplinary measures (Crampton & Starfield, 2004; Sibthorpe, 2005).
2. Changing incentive structures - e.g., moving from exclusive fee-for-service to mixed remuneration models, including capitation, salaried and pay-for-performance
3. A dedicated change manager/facilitator role in the process (Chreim, et al., 2010)
4. Critical engagement of physician leaders and colleges/associations in all aspects of the change process (Chreim, et al., 2010; Kirkpatrick, et al., 2009)

### Recommendations for government action

- Work with educational institutions and regulatory bodies to modify initial and continuing training curricula to provide skills and roles that are consistent with transformational efforts.
- Engage physicians and other health professions in policy development in a sustained, real, and ongoing way by soliciting input on all initiatives at both a high level and a local level. Recognize that this engagement may not be easy due to historical and political forces, and that incentives, resources, confrontation, or use of regulation may be necessary.
- Provide funding, regulations, and incentives for physician and other health professions engagement. Ensure financial incentives are aligned with the change agenda.

## *Evidence Statement 5: Large system transformation that aims to increase patient-centredness requires significant engagement of patients and families in the change process*

### Contextual Factors

1. Existence of processes to engage patients and their representatives in feedback and decision making throughout the system (Bauman, Fardy, & Harris, 2003; Blunt, Harris, & NESTA, 2009; Davis, Schoenbaum, & Audet, 2005; Fraenkel & McGraw, 2007)
2. Historical role of patients in health care system decision-making and change efforts, including the culture of the health care system and the value it places on patient and family voice
3. Success of previous attempts to increase patient-centredness (and their perceived success)

### Mechanisms

1. On-going, sustained engagement with patients (and families) for continuity (Mitton, Smith, Peacock, Evoy, & Abelson, 2009)
2. Ensuring alignment with measurement and reporting mechanisms to ensure information for patient/communities is clear (Thompson, 2003/4)
3. Explicit value placed on equity (representation of traditionally under-represented groups, deliberate inclusion of patient and family voices that are typically or historically silent in decision-making processes) (Chessie, 2009; Thompson, 2003/4)
4. Patient/community involvement in planning and developing of services (Chessie, 2009; Thompson, 2003/4)

### Recommendations for government action

- Set up independent governance and advisory mechanisms for health care institutions and bodies at the provincial, regional, and local levels, including an independent coordinating body and/or public involvement on the agency's board or other committees.
- Ensure the right players are involved in the change process through adequate funding and compensation, training of patients and families for active involvement, engagement of Aboriginal Health Agencies, and professionals who have community engagement/development experience.

- Collect information on what patients really want through robust surveys or other data collection methods. Be careful that true patient engagement is not reduced to patient satisfaction surveys.

## Acknowledgments

The Research Team Members who worked on this project were Jessie Saul (synthesis lead; North American Research & Analysis, Inc.), Allan Best (co-principal investigator; University of British Columbia, Vancouver Coastal Health Research Institute, and InSource Research Group), Jennifer Bitz (project manager; University of British Columbia, and InSource Research Group), Simon Carroll (synthesis team; University of Victoria), Claire Higgins (synthesis team; Institute of Public Health in Ireland), Mimi Doyle-Waters (research librarian; University of British Columbia and Vancouver Coastal Health Research Institute), Stirling Bryan (co-principal investigator; University of British Columbia and Vancouver Coastal Health Research Institute), and Craig Mitton (co-investigator; University of British Columbia and Vancouver Coastal Health Research Institute).

Seven international experts comprised the project's Expert Advisory Panel. The panel was convened at strategic points throughout the process to provide critical feedback on the research questions, literature review methods, and initial findings. The panel was chaired by Trisha Greenhalgh, University College London, and Steven Lewis, a health policy and research consultant based in Saskatoon and Adjunct Professor of Health Policy at the University of Calgary and Simon Fraser University. Greenhalgh and Lewis played such a central role in the project that they effectively served as co-investigators, providing direction, insight, and guidance as the project moved forward. For more on their qualifications and background, please see the Methods section below. The rest of the Expert Panel consisted of Helen Bevan and Chris Ham from England, and Nick Kates, Gill White, and Charles Wright from Canada.

In addition to the Research Team and the Expert Advisory Panel, the Saskatchewan Ministry of Health also identified a core group of advisers who provided extensive amounts of their time to review project plans and materials, and to provide critical on-the-ground knowledge of how the information provided by this project would be used in practice by those actively engaged in the transformation process. They served as the Saskatchewan Advisory Committee, and consisted of the following members:

- Pauline Rousseau – Executive Director, Policy & Planning Branch, Ministry of Health
- Kathleen Peterson – Director, Health System Planning & Policy, Policy & Planning Branch, Ministry of Health
- Sharon Lyons – Senior Policy Analyst, Policy & Planning Branch, Ministry of Health
- Donna Magnusson – Executive Director, Primary Health Services Branch, Ministry of Health
- Ron Knaus – Executive Director, Workforce Planning Branch, Ministry of Health
- Leslie Grob – Director, Saskatchewan Surgical Initiative, Ministry of Health
- Anne Neufeld – Director - Planning, Policy and Performance, Saskatoon Health Region
- Michelle Schmalenberg – Communications Consultant, Ministry of Health
- Bonnie Brossart – Chief Executive Officer, Health Quality Council
- Roger Carriere – Executive Director, Community Care Branch, Ministry of Health
- Lynn Digney Davis – Chief Nursing Officer, Workforce Planning Branch, Ministry of Health

- Cecile Hunt – CEO, Prince Albert Parkland Regional Health Authority
- Deb Jordan – Executive Director, Acute and Emergency Services Branch, Ministry of Health
- Shaylene Salazar – Acting Executive Director, Medical Services Branch, Ministry of Health

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## Introduction

The Saskatchewan Ministry of Health has a mandate to support a significant transformation of the provincial health system. In support of that mandate, the Ministry has undertaken four significant initiatives in the areas of Patient and Family Centred Care, Primary Health Care Redesign, Lean for healthcare, and the Saskatchewan Surgical Initiative. More information on each individual initiative is available in Appendix A. Primary Health Care redesign, Lean for healthcare, and the Surgical Initiative are viewed as supporting the goals and objectives of the Patient and Family Centred Care initiative. While all four initiatives are still in the early days of planning and implementation, each initiative has been substantially isolated from the others, which has limited the application of lessons learned from one area to another, as well as the leveraging of resources toward common goals and objectives.

The Ministry recognizes that success hinges on a cultural change based on collaboration, a comprehensive innovation strategy for system redesign, and systems integration. Therefore, the Ministry staff sought guidance -- on such considerations as successful models and strategies, partnership principles (including with patients), monitoring and evaluation -- from a systematic review of knowledge on large system transformation. With all of these considerations, there was an emphasis on the role of government. To that end, the purpose of this project was to conduct a systematic realist review and synthesis, with a methodology purpose fit for policy guidance (see Methods section below).

This Expedited Knowledge Synthesis was part of a Canadian Institutes of Health Research two-year pilot program designed to provide high quality, relevant, and timely reviews for decision makers. The four preliminary objectives for the synthesis were as follows:

- Identify both successful and unsuccessful examples of large system transformation, and in those examples, determine the role of provincial government, including policy development and implementation.
- Develop a deeper understanding of the strategies and mechanisms that contribute to success in large system transformation.
- Identify barriers and challenges to system transformation, and recommend what roles government might play in resolving them.
- Identify options for monitoring and evaluation of processes and outcomes for large system transformation initiatives, including the role of government [provided separately from this report].

In order to maximize the utility of this report, its focus is on evidence extracted from both the published literature and current practice regarding Large System Transformation generally. While literature on large system transformation at the macro level is fairly limited, several overarching themes emerged. These themes were captured as evidence statements derived from the literature, and were then validated and modified by a panel of international experts as well as a larger body of current

practitioners. Each evidence statement is accompanied by contextual factors and mechanisms that are important for successful achievement of transformation (see Methods section below).

Because this project was specifically tasked for identifying "how" to conduct large system transformation as opposed to simply describing the "what" or the "why", brief descriptions from both literature and practice in each of the four Saskatchewan initiative focus areas serve as instructive examples. An additional focus of this report is the role of government, and how a government agency (or Ministry) can facilitate, support, and create the contextual factors and mechanisms that are critical for success and sustainability of large system transformative efforts. Recommendations to this end are included throughout the report.

A guiding principle throughout this report is the need for integration of large transformative efforts. While the Saskatchewan health system has been formally integrated through a decentralized regional structure for nearly two decades, there has been less substantive integration. In addition, two key sectors - physician services and drugs - have never been part of the regional structures. Given the applicability of our findings to all four Saskatchewan initiatives, and the Ministry's stated intention to have all of the initiatives supporting the development and enhancement of a focus on Patient and Family Centred Care, many of the recommendations highlight areas for potential action to enhance substantive integration of transformative efforts across the four initiatives.

## Definition of Large System Transformation

Large System Transformation can be conceived of as having a number of dimensions, e.g., expansion of publicly financed/delivered services; structural reorganization; improved quality; improved efficiency. For the purposes of this project, **Large system transformation** refers to systematic initiatives to create coordinated change in health care across organizations working toward shared priorities within specified boundaries. For example, within the geographic and political boundaries of the Saskatchewan health system, large system transformation encompasses the necessary structural, process and policy changes needed to leverage change in each current initiative (the Saskatchewan Surgical Initiative, adopting patient- and family-centred care, Lean, and improving primary health care) to create transformative synergies across the full range of services and organizations involved currently and going forward. This change can be coordinated in an organic, locally-adaptive and self-organising way (bottom-up) as well as centrally controlled (top-down).

The search for literature was narrowed by a desire to look primarily at transformations (both successful and unsuccessful) of large health care systems. This included national health system transformation as well as large multi-site organizations (e.g., the National Health Service in the UK, or the Veterans Health Administration in the US). Micro and meso-level examples are included where they have generalisable lessons regarding contextual factors and mechanisms that can be applied to large systems, as well as where they have a specific focus on the role of government in transformative efforts. Specific attention was paid to articles that were particularly relevant or adaptable to a

Saskatchewan context, as well as articles that expanded on the "why" and "how" transformation efforts were successful or unsuccessful.

## Health systems as complex adaptive systems

In 2001, the Institute of Medicine produced a landmark report called Crossing the Quality Chasm, in which is endorsed the idea that health care systems are complex adaptive systems (CAS). This report followed an important publication in 1998 (Zimmerman, Lindberg, & Plsek, 1998), and was accompanied by a series of publications in the British Medical Journal (Fraser & Greenhalgh, 2001; Plsek & Greenhalgh, 2001; Plsek & Wilson, 2001), all advocating the same emphasis on adopting the CAS lens to better understand how to improve and transform health systems. The IOM report was very important as it is the first high-level consensus report that endorses the CAS lens (Institute of Medicine (U.S.). Committee on Quality of Health Care in America., 2001).

What all of these publications emphasized is the dual nature of CAS: that they are at one and the same time complex and unpredictable, yet amenable to guided transformation by applying simple rules, as long as these rules are applied with the requisite flexibility to allow for adaptation processes.

An important warning for potential agents of health system transformation was embedded in this advocacy of CAS. Taking the principles of CAS seriously means avoiding over-specification in situations where there is a high level of uncertainty, and only utilizing highly specific guidelines where the evidence is overwhelming and the certainty of the relationship between particular actions and particular outcomes is very high (Institute of Medicine (U.S.). Committee on Quality of Health Care in America., 2001).

Another key lesson from the CAS approach is that many problems can be better addressed by using a systems lens, rather than focusing on individual changes (Best & Holmes, 2010; Best, Trochim, Moor, Haggerty, & Norman, 2008). From this lesson we arrive at a recognition that system alignment and integration does not necessarily mean standardization, but rather the implementation of fundamental principles across the system or organization which have a high degree of interpretive flexibility embedded.

Fundamentally, for successful LST, the CAS approach emphasizes reliance on the natural creativity of health care professionals to adapt to circumstances and evolve new and better ways of generating quality in health care. The key is to create positive conditions for change by supporting a work environment conducive to harnessing the skills and capacities of individuals in the system to improve quality.

Implications for planning are profound. The agent of change has to give up notions of 'control' over the process of change, and should avoid language that emphasizes 'overcoming resistance' (Plsek & Wilson, 2001).Instead, efforts should be directed toward iterative planning cycles that build in an understanding that successful action is less about meeting targets and more about shifting the systems behaviour through generic guidance and steering mechanisms. Changing the principles by which

people carry out their work is much more important than attaining a target that is often generated quite arbitrarily in the first place.

Implementing change in CAS requires constant monitoring and adaptation to new contexts. Building in principles and resources that support a *learning environment* (Senge, 1990), allows organizations to take full advantage of local knowledge in generating continuous improvements.

Evaluating change in LST, as informed by a CAS lens, means adopting appropriate goals and objectives, avoiding over specifying multiple outcomes, and paying attention to positive movement in generic processes that support improvement. Celebrating success is just as important as identifying error and focusing on gaps in quality.

There is an important synergy between the CAS theoretical perspective, the realist methodology and the particular approach we have taken to policy recommendations. Because CAS advocates for close attention to the basic rules or principles of action of a system and its environmental parameters, the realist emphasis on 'mechanisms' and 'context' (see below) allows the review to develop policy recommendations that avoid elaborate checklists or instructions for change; rather, the recognition of complexity tied to the need for a strategic focus means that recommendations offer a variety of policy options that aim to bolster a series of cross-cutting basic principles of action: *leadership*, *measurement*, *historical awareness*, *physician engagement and a patient-centred perspective*.

## Methods

Realist synthesis is an approach to systematic literature review that arose out of a fundamental dissatisfaction with the effectiveness of the more traditional approaches to systematic review to inform policy with evidence. In a series of articles in the journal *Evaluation* (Pawson, 2002a, 2002b), Ray Pawson outlined and summarized just what this dissatisfaction was from a policy-making perspective, why the orthodox approaches regularly failed to inform policy, and what might be a better solution. What Pawson identified was that meta-analysis could, in principle, tell you whether a program worked or not, but it couldn't tell you how or why; thus, when inevitably, an application of a program in a different context produced different results, the policy-maker is bereft of explanation (Pawson, 2002a). Conversely, in-depth description of successful programs allowed policy-makers to better understand how something worked in place A, but couldn't tell them what were the key mechanisms that made it work, other than to faithfully reproduce the entire program and its environment in place B (an impossibility).

What Pawson aimed to do was to shift the entire focus of social and health intervention research from looking at *programs* as agents of change, to looking at how *people* use the *resources* that programs offer to make change. These 'resources' are made up of various social mechanisms and the contexts in which these mechanisms are employed by the people making the change. Thus, the review strategy would no longer look for successful 'programs', but rather for successful mechanisms and the supportive (or not) contexts in which they worked.

What this meant in terms of policy adoption and adaptation was that the policy-maker no longer had to try to reproduce successful programs and their accompanying environments; now, they could look to adopting successful mechanisms and adapting them to their specific policy contexts. Furthermore, they could learn about how certain contextual factors make it impossible to successfully implement certain mechanisms and that a policy intervention may aim at changing the context as a first step towards positive change.

This rapid review project, and the subsequent report has utilized a modified *realist synthesis* approach for two reasons: 1) the Saskatchewan government has to adopt change mechanisms that have the most likelihood of success, given their particular policy context; therefore, successful LST examples elsewhere could not be reproduced as a whole, but rather needed to be broken down into mechanisms and contextual components, as a sort of menu of change ingredients to be adopted and adapted strategically by Saskatchewan; 2) the realist approach is more compatible with a complex adaptive systems perspective and the literature than meta-analysis is. Rather than being thrown off course by unexpected adaptations and changes, the realist approach encourages an anticipatory attitude to the complex relationship between generative mechanisms, contextual parameters and variant outcomes.

What we hope to offer with a realist synthesis approach is not a totally rigid, standardized set of instructions for success, but rather a set of ingredients, that may combine to create positive synergies for change and transformation. This means ingredients and dosages can be modified and even substituted, some things can be left out, and even the order of activities will change. All of these contingencies will be subject to the changing policy environment within which Saskatchewan Ministry of Health policy-makers have to live and work.

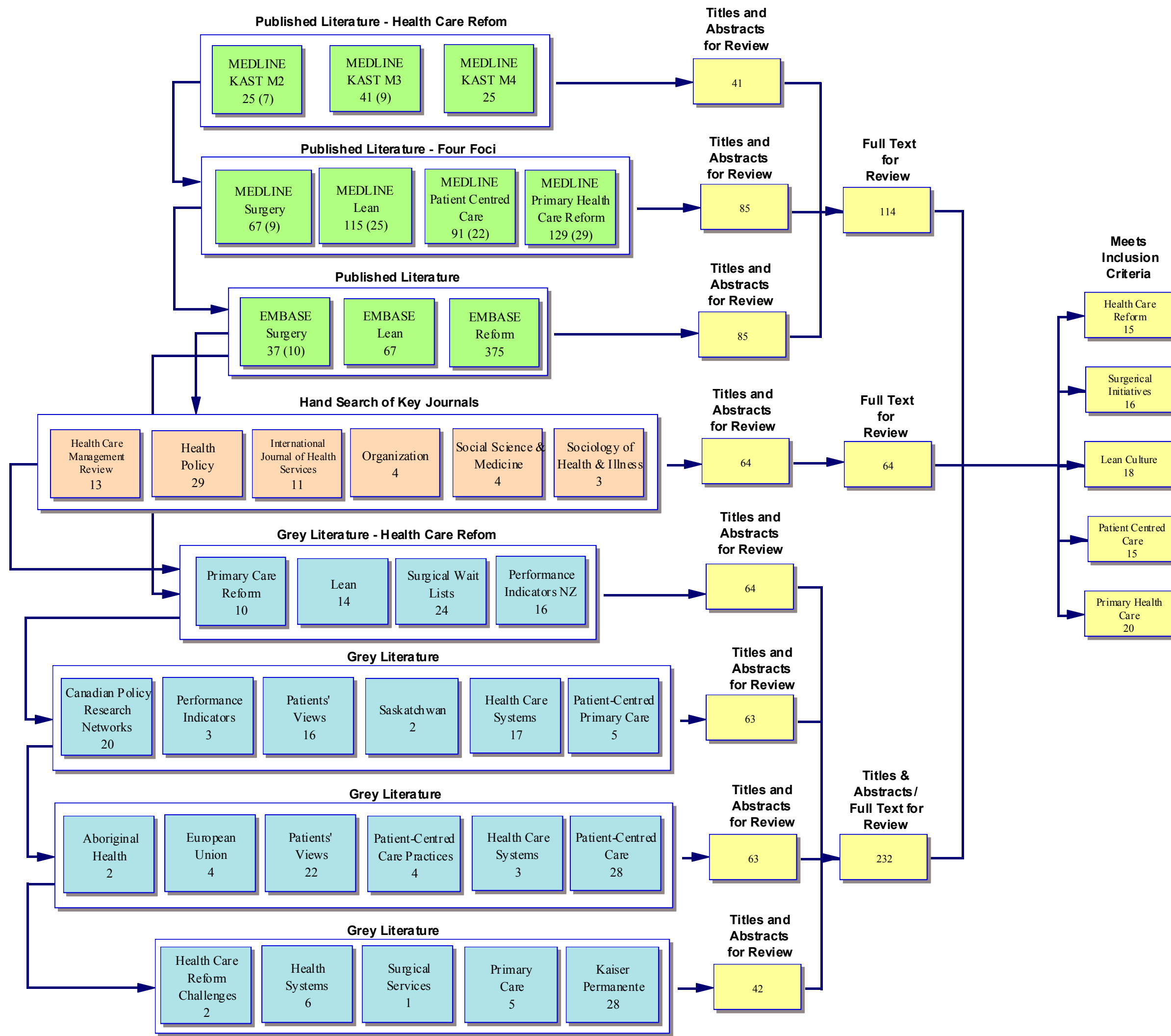
## Search methods

The search protocol was comprised of the concepts health services and macro systems transformation in relation to a) health care reform, b) surgical initiatives, c) lean culture and d) patient- centred care (see Appendix B). The transformation of primary health care and reform was also addressed in the protocol. Members of the team and expert panel provided search terms which contributed to the development of the list of key terms for each concept (see Appendix B). The published literature was searched using these terms and the subject headings in the databases MEDLINE and EMBASE from 2000 to present.  Numerous searches were performed in these databases which resulted in hundreds of references. Titles and abstracts were reviewed for relevance based on a broad inclusion criteria, including use of a theoretical lens consistent with a complex systems perspective, a focus on whole system transformation or partial system transformation with lessons that could be applied to a macro-level scale, adaptability of the findings to a Saskatchewan context, a focus on the “why” and “how” of system transformation, articles written by key authors in the field. In total, this resulted in 211 references. Two to four members of the team further reviewed the 211 references again based on titles and abstracts. A selected number of these references were reviewed for agreement between reviewers and disagreement was resolved by discussion. In total a 114 papers were selected for full review.

Based on discussions between team members, the expert panel and the Ministry, the depth of the searches evolved. References from key papers were searched for other relevant papers. Six journals from health, business and sociology were hand searched from 2000 to present due to their previous history of indexing papers on large system transformation. The full texts of 64 papers were reviewed from the six journals.

Building on these searches and the resulting papers, an extensive search of the grey literature was executed. These searches involved reviewing a variety of government websites in Canada, the US, UK, Australia, New Zealand and the European Union. Specific organizations were also searched, for example, the Canadian Policy Research Network, US Department of Veterans Affairs, Kaiser Permanente, Commonwealth Fund, OECD Health Working Papers and Western Canada Waiting List Project. The searches looking for the main concepts and the four foci were extensive and were often adapted due to requests from the reviewers as they extracted information from the research papers. It was a very iterative process. Of the hundreds of websites and papers reviewed on the Internet as well as suggestions from the expert panel, 232 papers or titles and abstracts were reviewed. Based on these searches the final selection of papers for the four foci were 16 related to surgical wait lists, 18 related to Lean for health care, 15 related to patient-centred care (from a systems perspective), 20 related to primary health care redesign, and 15 related to health care reform of large systems. Figure 1 provides a visual diagram of the search process.

**Figure 1: Search strategy and results**




## *Use of external experts*

Throughout the process of conducting this review and synthesis, the research team engaged in an interactive dialogue with a group of international experts in system transformation. To begin with, a small group was gathered to provide key feedback throughout the process. This group was the Expert Panel for the project, and was chaired by Trisha Greenhalgh, OBE, MD, FRCP, FRCGP, FHEA, Professor, University College London, and Steven Lewis MA, a health policy and research consultant based in Saskatoon and Adjunct Professor of Health Policy at the University of Calgary and Simon Fraser University. Greenhalgh and Lewis played such a central role in the project that they effectively served as co-investigators, providing direction, insight, and guidance as the project moved forward. Dr. Greenhalgh is qualified in both medicine and sociology, and leads a UK-based team researching complex change in healthcare. She helped develop and refine the realist review method of systematic literature review. She has published 120 peer-reviewed papers and eight textbooks and sits on a number of national and international committees and working groups in health policy. Mr. Lewis has led an applied

health research agency in Saskatchewan and has advised governments, regional health authorities, and professional associations on strategies to pursue transformational change. He also sits on the Board of the Saskatchewan Health Quality Council, whose activities are central to the province's change agenda. The rest of the Expert Panel consisted of Helen Bevan and Chris Ham from England, and Nick Kates, Gill White, and Charles Wright from Canada. They were convened at strategic points throughout the process to provide critical feedback on the research questions, literature review methods, and initial findings.

In addition to the Expert Panel, the research team realized that many of the gaps in the literature could be filled by examining current or very recent transformation efforts. To that end, an international body of nearly 100 practitioners and leaders in transformation efforts was convened and surveyed to provide critical feedback on the preliminary findings, and to help with development of recommendations for government action based on their knowledge and experiences. Of those invited to participate, 45% (N=44) completed the survey and provided invaluable nuances and added to the depth and insights provided within this report. Due to the request of some of the Consensus Network panelists not to be identified, we have not provided a list of respondents here.

A final mechanism for engaging additional expertise for this project was the convening of a Learning Forum. This was intended to be 6-8 organizations and systems on the cutting edge of system transformation efforts, engaging on various topics through electronic media, thus sharing in the current and emerging lessons learned from ongoing efforts to transform their health care systems. While the forum members have been identified, due to the time constraints of the project limited substantial engagement was able to take place. Where relevant, the lessons shared through that process have been inserted into the report. However, the Forum exists as a potential tool that Saskatchewan may want to use in the future as it progresses in its own transformative efforts. For a list of Forum members identified to date, see Appendix E.

## Evidence from the Literature and Practice

As described above, each identified article from the literature in one of five topic areas (large system transformation generally, patient & family-centred care, primary health care redesign, Lean for healthcare, and surgical wait time and quality improvement) was reviewed by one or more synthesis team members. Themes were extracted from each article regarding both mechanisms and contextual factors that supported or created barriers for large system transformative efforts. The themes were reviewed within each topic area, and across topic areas. Common crosscutting themes were then identified and highlighted as evidence statements which may be most useful to Saskatchewan change leaders as they consider the totality of their efforts to transform the health care system in the province. Lessons specific to each topic area individually were captured and are represented in Appendix C through mini "case-studies" with references back to the literature from which they were drawn. In this way both high-level crosscutting themes as well as initiative-specific lessons learned have been captured and are presented here.

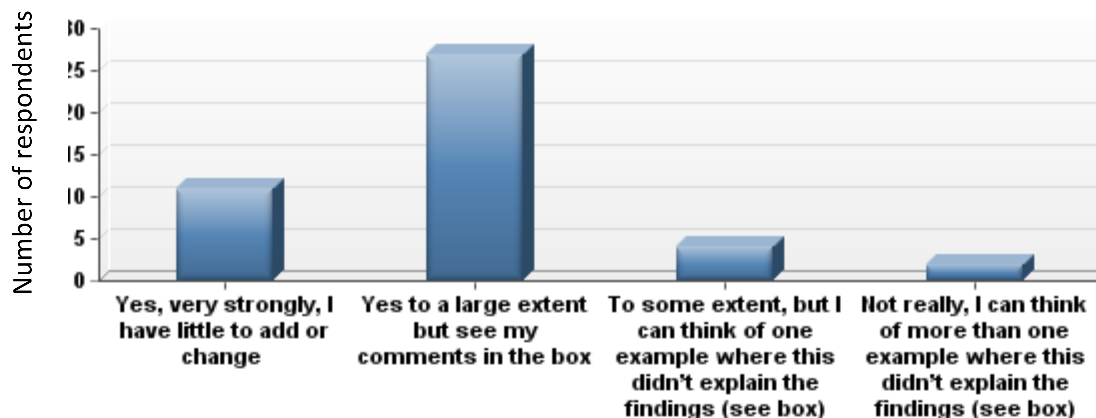
As a final element of the evidence, we consulted leading experts in large system transformation in health care through a Consensus Network (see Methods above). Each of the five Evidence Statements

were presented to the Network members who were then asked to comment on how each evidence statement and related mechanisms and contextual factors resonate with their own experience of large system transformation and/or their knowledge of the literature on such initiatives. In addition, Network members were asked to comment specifically on what a governmental agency could do to support or facilitate achievement of each evidence statement. The comments received are summarized in the "recommendations" section after each evidence statement.

## *Evidence Statement 1: Large system transformation in health care systems requires both top-down leadership that is committed to change, as well as distributed leadership and engagement of personnel at all levels of the system.*

When asked whether this statement resonates with their own experience of large system transformation, 11 of 44 Consensus Network (CN) respondents (25%) reported that it did "very strongly," 27 (61%) said "to a large extent," 4 (9%) said "to some extent, but I can think of one example where this didn't explain the findings," and 2 (5%) said "not really, I can think of more than one example where this didn't explain the findings."

**Figure 2: Consensus Network responses to Evidence Statement 1**




Both in the literature that was reviewed, and from the experiences of those engaged in transformative efforts, the concept of distributed leadership was coupled with the need for commitment to change at the most senior levels of an organization or system (Blunt, et al., 2009).

In a report of a study comprised of longitudinal comparative case studies in 12 health care systems, Lukas et al. identified five interactive elements that appear critical to successful transformation of patient care: 1) Impetus to transform, 2) leadership commitment to quality, 3) improvement initiatives that actively engage staff in meaningful problem solving, 4) Alignment to achieve consistency of organization goals with resource allocation and actions at all levels of the organization, and 5)

integration to bridge traditional intra-organizational boundaries among individual components. In the cases studied, senior leadership steered change by setting a consistent direction for change efforts, providing resources and accountability, and demonstrating an authentic passion for and commitment to quality. Leadership involved more than just a single person (e.g., a CEO); often a senior leadership team worked as a unit to create and maintain a change strategy. At the same time, improvement initiatives actively engaged staff across disciplines and hierarchical levels in problem solving around a concrete, meaningful, urgent problem (Lukas, et al., 2007).

As another example illustrating the importance of leadership for transformation efforts, during the implementation of Lean processes into Northwest Health (New York's capital region), a Lean champion was identified as a vice president's position, reporting directly to the CEO, and was directly responsible for translating the vision into action (Brown & Duthe, 2009). In most Lean or clinical process redesign examples identified, leadership and change management was primarily top-down (McGrath, et al., 2008). Yet Lean is also a good example of a transformative initiative requiring bottom-up engagement, training, experience, and eventually, leadership (Lukas, et al., 2007; McGrath, et al., 2008). Through regular and repeated experiences with Lean processes (known as Kaizen events or Rapid Process Improvement Weeks), staff responsible for *doing* the work are directly engaged in making changes to work processes to make them better (*Going Lean in Health Care*, 2005). Without clinical or executive leadership commitment to implementing changes identified by staff, such transformative initiatives are doomed to failure.

Studies that attempted to focus on top-down or bottom-up leadership exclusively often resulted in mixed findings. In a review of effective strategies for improving quality and safety of health care, Scott reported that clinician/patient driven quality improvement strategies were associated with stronger evidence of efficacy and larger effect sizes than manager/policy-maker driven ones. Scott acknowledges, however, that manager/policy-maker driven strategies have often not been evaluated sufficiently to determine their comparative effectiveness (Scott, 2009). While top-level commitment to change is critical, based on the literature and experiences of the experts we consulted, there is also a recognition that a model built on "commitment" (everyone working toward a common goal) will be more effective than one built on "compliance" (requirement to do certain things or risk sanctions). (CN)

In addition to top-down leadership, distributed leadership can also be critical elements of successful transformation efforts. As Senge (1996) argued and as has been followed up, particularly in the educational sector (Spillane et al., 2004), leadership cannot just rely on CEOs and top management, but rather needs to ‘permeate’ throughout the organization. Distributed leadership means focusing on the practices and relationships involved in leadership as well as developing shared and evolving leadership through purposeful mentoring strategies. In the health care sector in particular, the complex layering of the system and the multiple levels of professionalized autonomous practice, means distributed leadership is not only optimal, but necessary for large scale transformative change to take place. An emphasis was also placed on change management agents or change facilitators within the literature (Chreim, et al., 2010). “Managers” of change follow direction from above, while change “facilitators” have much more authority and autonomy to evolve the strategies used to effect change in response to the environment, stakeholder responses, and other factors. One CN respondent noted that the original

intent by Primary Health Care, Saskatchewan Health in developing high performance teams within primary health care sites was to develop facilitators that would work in and with the communities that they served. The intent was awe-inspiring but the application over time has supported "managers" rather than "facilitators". Perhaps a return to the principles of facilitation in primary health care settings would serve Saskatchewan well. (See (Barrett, Hogg, Ramsden, & White, 2006; Fullard, 1991) for more).

## Contextual Factors

Several **contextual factors** were identified in the literature as being particularly important to support accomplishment of both top-down and distributed leadership as described above. They are presented here in the order of importance as identified by the Consensus Network (see methods), with those factors with the highest number of respondents indicating they were either "very important" or "extremely important" listed first.

1. Mission, vision, and strategies that set the system's direction and priorities (clearly laid out and known by everyone at all levels of the system) (*Going Lean in Health Care*, 2005; Harrison & Kimani, 2009; Lukas, et al., 2007). (93% agreement)

2. Informal values and norms of the system. (93% agreement) According to the Institute for Healthcare Improvement, "an organization's culture is the set of values and beliefs that cause people to behave in certain ways" (p. 5). By allowing people to behave differently, they can experience a better set of results, which will result in the creation of a new culture (*Going Lean in Health Care*, 2005).

3. Human resources capacity (Harrison & Kimani, 2009), specifically previously developed capacity for undertaking the transformation initiatives proposed. (91% agreement)

4. Politics, policy mandates, governmental initiatives. (86% agreement) These are described by Harrison & Kimani as "external conditions" that can create pressures for radical change (2009). These can provide an externally driven "impetus to transform" as described by Lukas et al., 2007, although in some cases impetus for change can come from within an organization (or system). For example, all *Pursuing Perfection* (P2) Program grantees reported that the grant itself was a major driving force behind its improvement efforts. (P2 was a Robert Wood Johnson Foundation initiative created in 2001 in response to the Institute of Medicine's report *Crossing the Quality Chasm: A New Health System for the 21st Century*) (Lukas, et al., 2007).

5. Degree of integration of the system (the more tightly woven/integrated the system is, the easier it is to implement system-wide change; conversely, the larger and more complex the system, the more difficult alignment of goals across the system can be) (70% agreement)

   There was quite a bit of discussion among the Consensus Network participants on this point. While in some contexts, a tightly woven or integrated system may be easier to align a mission, vision, or goals, the opposite may also be true. One CN respondent referred to Granovetter's

work on the strength of weak ties, and noted that "the degree of integration may not only support system-wide change, but may act as a barrier when the change conflicts with strongly held informal values/norms. I do not necessarily support the idea that tightly woven systems make for smoother transformation." Along the same lines, one respondent proposed that from the perspective of a complex adaptive system, having a tightly woven system might actually stifle the innovation necessary for creating transformation. "Large scale change with a tightly defined end point in mind will likely not be as effective as one where the general vision is clear, there is some commonly agreed sense of the general direction, but there is no master plan that the change process is forced to 'fit' into."

Another respondent pointed out that some transformation efforts are aimed at increasing integration, in which case the amount of integration present prior to the transformation effort might not be as relevant. And finally, another respondent suggested that it is not only important for the system to be integrated, but that there also needs to be alignment between political and professional institutions. "Too commonly, in the UK at least, so called 'modernisation' aims of policy for workforce reconfiguration have been stymied by a professional response that protects jurisdiction and identity."

6. Amount and consistency of funding for change initiatives over time (67% agreement)

   While funding for change initiatives might be critical for launching the change at the outset, as one CN respondent pointed out, "'funding for change initiatives over time' creates an impression that change is something outside of or on top of normal business that continues to be funded. **The key is how we hardwire action and change into the essence of what people do everyday."**

## Mechanisms

In addition, several mechanisms for change were identified in the literature as being important to support accomplishment of both top-down and distributed leadership as described above. Similar to the contextual factors, the mechanisms are presented here in order of their average score of importance as rated by the Consensus Network. It should be noted that there was very little variation in the number of respondents endorsing each mechanism as being "very important" or "extremely important" with respect to Evidence Statement 1.

1. Alignment of vision and goals to achieve consistency of these with resource allocation and actions at all levels of the system, including integration to bridge intra-organizational boundaries (Lukas, et al., 2007). (90% agreement) For many sites in the Lukas study, aligning goals down to the level of employees was challenging. All study systems used performance measures in some form as a means of ensuring accountability and to encourage alignment, but effective alignment and accountability were difficult to achieve.

2. Active management of the change strategy, perhaps through dedication of a change agent(s) - one or more individuals dedicated solely to managing the process of change (Chreim, et al., 2010; Harrison & Kimani, 2009) (89% agreement)

3. Small team projects (pilot projects) that demonstrate success and can be scaled up to larger system change (Brown & Duthe, 2009; Caldwell, et al., 2008; Harrison & Kimani, 2009; Lukas, et al., 2007; McGrath, et al., 2008) (77% agreement)

   Caldwell suggests that small team dynamics influence the success of projects, and that effective system change starts with small team change (Caldwell, et al., 2008). In their review of implementation of Lean thinking and processes into Northeast Health, Brown & Duthe recommend starting slow, and achieving some early successes, which then translated into much more of an organizational acceptance and knowledge of the value of the processes which made the marketing of Lean much easier (2009). McGrath et al. suggest that initial transformative efforts be selected based on problems that obviously need to be fixed, noting that "quick wins on high-profile problems engage staff and breed success" (2008, p. S34).

   There were several comments from the Consensus Network that agreed with this strategy. For example: "Pay more attention to small tests of change that build into larger changes."

   Yet there were several comments from the Consensus Network that suggested that pilot projects may suffer the fate of short-term commitment; that by the time results are achieved, the political will to continue or expand the work has evaporated. "Canada is the land of pilot projects." Another noted that sustainability of transformation efforts requires taking the pilot results to the next level. Much of the literature also agrees with these comments. In their description of clinical process redesign efforts in New South Wales and at Flinders Medical Centre in South Australia, McGrath et al. conclude that for transformative efforts to be sustained they must "become part of normal business for a health care organisation, not a series of one-off projects or crisis-driven reform programs." (2008, p. S34). Lukas et al. agree, and note that "full transformation may be attained only when multiple improvements are *spread* across the system and *sustained* over time" (2007, p. 319). Harrison & Kimani also note that "routinization ... requires integration of new practices into organizational routines and integration of new working assumptions into organizational culture" (2009, p. 43). Yet little information is presented in the literature about *how* to move an innovation or pilot project into a larger-scale process that is fully integrated into the organizational processes and procedures.

4. Assurance that actions taken as part of change strategy implementation will not be penalized (*Going Lean in Health Care*, 2005; Small & Barach, 2002). (75% agreement) However, this will require the transformation of a health care system's culture of blame and punishment (especially in an American context) to a culture of safety that "focuses on openness and information sharing to improve health care and prevent adverse outcomes" (Small & Barach, 2002, p. 1480).

## Recommendations for government action

Based on findings from the literature, and comments received from the Consensus Network and Learning Forum, recommendations have emerged regarding potential government action that could support, enhance, and facilitate efforts to achieve both top-down and distributed leadership for health care system transformation. The full set of comments from the Consensus Network survey is available as Appendix D, and are grouped and summarized here.

- Lukas et al conclude that meso-level (or even micro-level) change initiatives can lead to macro-level system transformation. Often, small changes and "early successes" can provide the evidence necessary to obtain support for expanding them within the system (Lukas, et al., 2007). Government should focus on ways it can support those meso- and micro-level changes through policy, resource allocation, etc.
- Facilitate communication and visibility of the transformation efforts, both internally and externally.
    - Make the large system transformation effort highly visible in the community/society. Trust (and experiences from the past) in the government/public sector/agency is extremely important.
    - A governmental agency (e.g. ministry of health) could assist the process of change by ensuring that the evidence-based reasons for the change are being constantly communicated and explained to the stakeholders and semi-independent actors in the system with special emphasis on how those particular actors fit into the overall reform.
    - As a caveat to the previous point, it depends on whether the particular government agency has a history of showing a leadership role and has legitimacy to do so. If this is the case then key people in this agency need to be visible and all giving a consistent message. If the agency does not have a history of showing leadership then they need to work though those who have.
- Clearly articulate the goals of the initiative, and provide adequate resources to get the job done (provide both the external pressure and the internal resources for successful transformation)
    - Ensure strategies align with the clearly-articulated vision
    - Evaluate initial work, and continue to fund those strategies that are most successful.
    - Invest in leaders committed to change; Contribute to the training of managers and clinicians in leadership and change management throughout the system.
    - Recognize the time frame necessary for achieving large scale transformation
- Provide a central coordinating body for the change initiative(s)

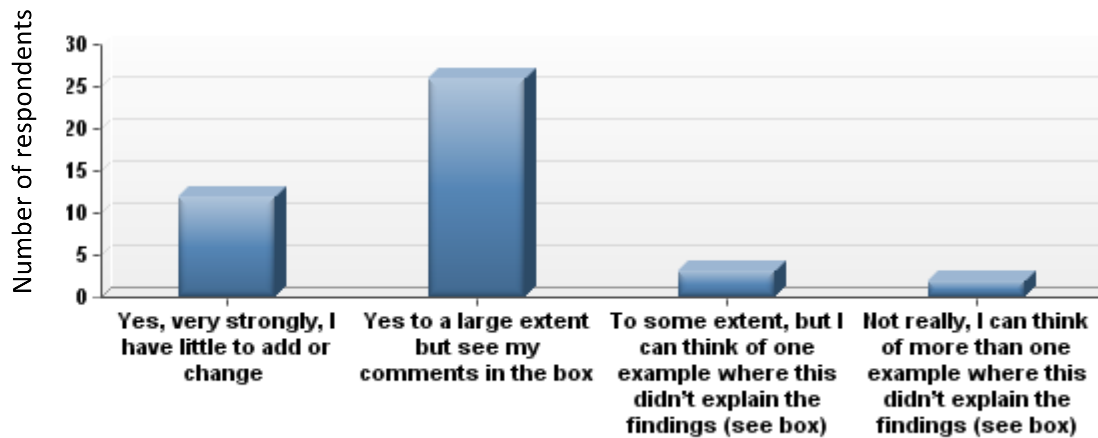
    - Make it someone's job (not something they do in their spare time)
    - Insulate it (as much as possible) from political change
    - Ensure broad representation on the coordinating body from all stakeholder groups, especially those who are typically underrepresented. Alternatively or in addition, consult widely regarding the need for and direction of change, thereby increasing awareness of and support for the transformation initiative.
- Provide a guiding role, not a dictating role. Be flexible.
    - Allow collaborations, networks, and other inter-organizational ties to develop naturally
    - Recognize that change takes time - be realistic in terms of targets set, and timelines.
    - Specify outcomes and provide resources, but do not dictate HOW the work is to be done.
    - Set up forums to share examples of success that begin to provide a momentum in themselves for others to learn from.
- Demonstrate the political will to push for objectives or strategies that may not be unanimously popular. Ensure that strategies proposed are evidence-based.

Given the early stages of much of the work Saskatchewan is engaged in, there is little to be said about how these recommendations relate to current practice. There is clearly the top-down leadership commitment to change. What remains to be seen is how distributed leadership and change facilitation will be developed and sustained throughout the health care system. Recommendations related to Evidence Statement 4 below may also be useful in this regard.

## *Evidence Statement 2: Ongoing measurement and reporting on progress toward short and long-term goals is critical for achieving effective and sustainable large system transformation.*

When asked whether this statement resonates with their own experience of large system transformation, 12 of 43 respondents (28%) reported that it did "very strongly," 26 (60%) said "to a large extent," 3 (7%) said "to some extent, but I can think of one example where this didn't explain the findings," and 2 (5%) said "not really, I can think of more than one example where this didn't explain the findings."

**Figure 3: Consensus Network responses to Evidence Statement 2**




Many examples from the literature pointed to the need to adequately measure and report on transformation efforts as a means of continuing their impact, and adjusting the transformation trajectory along the way (Fraenkel & McGraw, 2007; Small & Barach, 2002). Almost without exception, successful transformation efforts were recognized and sustained through careful identification of measures and strategic reporting of those measures. However, a great deal of the literature also cautions that measurement can have counterproductive effects. For example, "Continuous measurement of processes is important, as is the choice of measures, because what gets measured influences behaviour. People may have an incentive to do the wrong thing if it will improve the metric" (*Going Lean in Health Care*, 2005, p. 9). Several Consensus Network respondents noted examples where those responsible for reporting data had become experts at gaming the system in order to improve the metrics without improving the quality of care being provided. It will be important to establish a process for revisiting the measures to ensure they are changing the behaviours that were intended. As one respondent concluded, "Measurement and reporting are important, but are not by themselves the silver bullet."

In that light, measurement needs to be in service of the shared vision and goals of the transformation initiative. "Measurement is critical, but people need to see it as focused on outcomes that we share as a common direction and purpose." (CN) In order to close the loop and link the measurements back to the vision, "the data need to be actively presented and explained by trusted experts before they begin to feel owned and therefore acted on." (CN)

Evidence also points to the recommendation that measures should also be simple and straightforward, not containing too many metrics (*Going Lean in Health Care*, 2005). As one Network participant said, "It is important to select the ones that will provide the 'biggest bang.'"

## Contextual Factors

Several **contextual factors** were identified in the literature as being particularly important to support accomplishment of measuring and reporting on progress toward short and long-term goals as described above. They are presented here in the order of importance as identified by the Consensus Network (see methods), with those factors with the highest number of respondents indicating they were either "very important" or "extremely important" listed first.

1. Infrastructure and system leadership commitment to reporting measurements throughout the system and beyond the system (in some cases) (Loftus, 2010) (98% agreement)

2. Information technology infrastructure capable of allowing for timely reporting of key indicators (primarily an electronic patient record/medical record) (Brokel & Harrison, 2009; Brown & Duthe, 2009). (84% agreement) Brokel and Harrison provide an in-depth description of Trinity Health's experience in redesigning care processes using an Electronic Health Record (2009). In addition, New Zealand's approach to development and execution of a health IT strategy is now viewed as "the best in the English speaking world" (CN).

Without an infrastructure capable of collecting and reporting on data, it is impossible to determine whether changes that are being made are having any of their desired impacts. "Data need to be simple, clearly visible to all stakeholders and available in real time so that problems can be analysed and corrected" (McGrath, et al., 2008, p. S33). A common data infrastructure across the system, such as an EMR, could be a critical piece of the IT puzzle for supporting and sustaining transformation initiatives.

Yet, as one Network participant pointed out, it is important not to be overly reliant on technology such as EMRs, since data extraction can be quite costly, time consuming and labour intensive. For example, if an IT system is too difficult to use, or dramatically increases the time spent on charting (or worse, requires duplicate data entry), providers are less likely to use it, or use it consistently. When it is not feasible or possible to extract the needed information from an EMR, manual processes can still be used. (CN) As one Learning Forum participant commented, "In some respects [our initiative] is rather anti-IT in that the work of process mapping, 5S, visual management etc makes use of Post-It notes, brown paper, marker pens and blu-tack rather than laptops and web-conferencing. The value of RPIW, or similar, events is the simple fact of having dedicated time for staff to meet in a non-hierarchical group where everyone can begin to appreciate the pressures and issues faced by colleagues. This face-to-face time is seen as very important. Where IT comes into its own is in helping to share and spread the changes and learning that result from these events. But this has to be both directed carefully and properly resourced – simply posting spreadsheets and data on an intranet won't have much effect since few people have the time to trawl through to find what is relevant to them."

## Mechanisms

In addition, several mechanisms for change were identified in the literature as being important to support accomplishment of measuring and reporting on progress toward short and long-term goals as described above. Similar to the contextual factors, the mechanisms are presented here in order of their average score of importance as rated by the Consensus Network. It should be noted that many more

respondents endorsed mechanisms 1 and 2 as being "extremely important" or "very important" as noted below than endorsed mechanism 6.

1. Consistency and transparency regarding definitions, calculations and reporting mechanisms - clarity around "what the numbers mean" when they are reported (Stoop, et al., 2005). (89% agreement)

   This mechanism was strongly endorsed by members of the Consensus Network. For example, "Bridging across different disciplinary and professional/cultural views and values is important. If these clash e.g., in understanding what measurement means, you get into problems." (CN) In addition, "There will always be an element of interpretation when it comes to framing issues (such as goals) and when it comes to explaining what the data gathered to measure progress means." (CN)

2. Selection and agreement of measures that accurately capture that which is intended to be measured. (e.g., identifying clear measures of "patient-centredness") (Burstrom, 2009) (87% agreement)

   Technology supports a drive for patient-centred care (Conway, et al., 2006). Gathering information is central to identify valid and accurate measures to determine if the system is truly patient-centred. For example, it was suggested in the literature that multiple indicators of patient satisfaction should be used, such as satisfaction with delays, providers, and/or information delivery (Boudreaux, et al., 2006).

3. Engagement of all (relevant) stakeholder groups to determine which measurements will be selected and reported on. Adequate representation is critical in order to avoid selecting measures that will change behaviours in negative unintended ways. (82% agreement)

   Several CN respondents agreed with this strategy, but advised caution, noting that measures should evaluate elements which may not be comfortable or desirable for all stakeholder groups. That is both their power and their potential downfall. It will require a governance structure that balances the need to gather all relevant voices at the table, and yet retain a measure of independence so that the final decisions are not biased by the inherent power structures or vested interests of various stakeholder groups. (See recommendations for more on this.) Adequate peer-review of measures is critical (and a missing element of the Scottish health care (HEAT) targets) to ensure that the measures are relevant, actionable, and timely, and that they do not create unintended consequences.

   Engagement of all relevant stakeholder groups was a theme repeated throughout the Consensus Network comments, specifically with an eye to engaging populations that are traditionally absent from decision-making activities. For the context of Saskatchewan, the Aboriginal population was identified as one that will be critical to engage in order to have a truly representative process.

4. Processes are developed and embedded for regular internal review of selected measures, which includes reviewing outcomes from small pilot projects for revision and improvement of subsequent efforts (80% agreement)

   One CN respondent added to this, suggesting that measures be introduced sequentially, rather than all at once. Another noted that measures need to be sensitive to change over the period of time in question, issuing a reminder that some health outcomes, such as chronic disease rates, have long latencies before they can be substantially shifted by feasible policies and programs.

5. Inclusion of incentives for (or penalties for not) acting on feedback from reported measures (including patient feedback); these must be sustained and systemic rather than one-time or short-term. (73% agreement)

   There was quite a bit of caution about this strategy expressed by the CN respondents. It was noted that incentives will be different for all individuals, and that if rewards/punishments for achieving certain measurement targets are implemented before their impacts are better understood, gaming of the system is more likely to occur.

6. Integration/standardization of measures throughout the system, including primary care, specialists, chronic care, prevention, administration, etc. (64% agreement)

   This statement had the highest proportion of respondents saying it was "very unimportant" (4) or "neither important nor unimportant" (12). One respondent noted that it may not be possible or desirable to standardize measures throughout the system. Another suggested that the time and effort it might take to come to consensus might not be worth the benefit of having a standardized measure. Yet another noted that while "there should be consistent themes, the details of monitoring and evaluation will need to be tailored to fit the needs of the local area as well as the overall system report - otherwise it will simply not be done well." If possible, "measures should be tailored to local circumstances, but in a way that allows them to be part of building a bigger picture."

## Recommendations for government action

Based on a comparison of the evidence from the literature with current practice in Saskatchewan, as well as comments received from the Consensus Network and Learning Forum, recommendations have emerged regarding potential government action that could support, enhance, and facilitate efforts to measure and report on progress toward short and long-term goals. The full set of comments from the Consensus Network survey is available as Appendix D, and are grouped and summarized here.

- Provide resources and infrastructure for measurement including:
  - Information technology systems for collecting and reporting on measures - specifically systems that have been grown from the "bottom-up" rather than purchased off-the-shelf to ensure maximum usability, usefulness, and flexibility.

    - Funding for infrastructure development
    - Funding for work it takes to collect the data for the measures
- Facilitate development of measures
    - Ensure that those who will be measured are involved in the development of the measures
    - Require that measures be developed
    - Allow measures to be flexible and contextually sensitive
    - Establish clear links between the transformation vision and the measures. This may include measuring things that do not always result in "positive" findings at all time points, which is extremely important for refining the strategies being used, but politically less popular.
    - Know that the measures are not everything - important work will be going on that will not be measured, and what is measured is not necessarily the most important component for creating system transformation.
- Establish independent oversight
    - "Ultimately, the measures must serve the vision and the system - and that might mean measuring things that some people don't want measured. But real change means shining a bright light on the behaviour and practices within the system by policy makers, administrators, stakeholders, etc. that are blocking change. Until we're willing to accept that measurement of change will highlight these things and some interests will be challenged within the system, we won't get change."
    - "While it is useful to involve stakeholders in a limited manner in setting performance measures, they will not have an interest in crafting measures that reflect poorly on their own performance though such measures will be critical in determining the success of the reform. For this reason, only the agency responsible for spearheading major reform should craft the ultimate measures, albeit based on input and knowledge from stakeholders. . . . In other words, no performance measure is better than an inadequate performance measure."
    - Leverage non-government scientists and research institutions in providing sympathetic but robust and independent review of measures used in large health systems.
    - Make use of the Health Quality Council to determine, measure, and report indicators.
- Offer rewards and sanctions for the measures

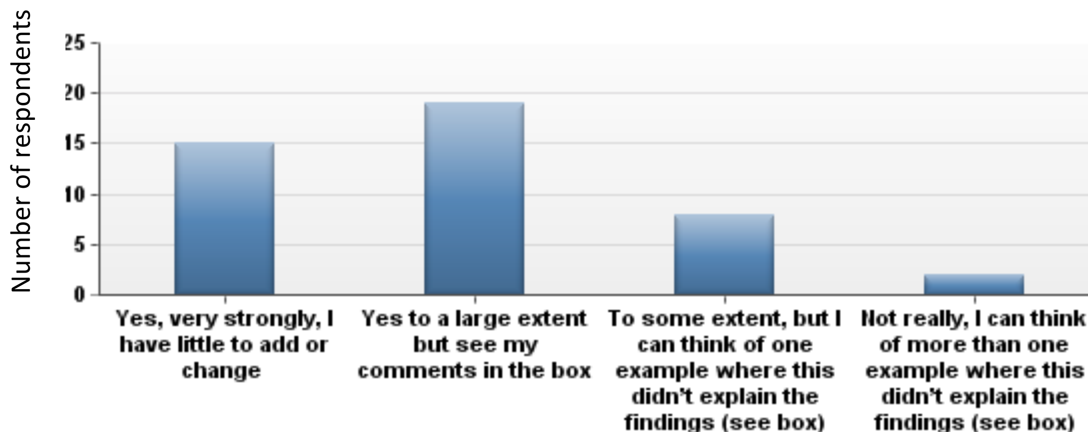
- Engage stakeholders to ensure selected measures do not have unintended consequences (yet do not give stakeholders ultimate power to 'veto' measures that are unappealing to them). Establish a process for changing measures if they are shown to not be changing behaviours in the desired ways, or select measures that reflect that the context will be changing over time.
- Do not reward gaming of the system. In the UK, the way they defined prevention tended to skew primary care activities to drug therapies.
- Wait until it has been established which measures are really important (and effective) by providing a period of time when the measures are not used for reward/punishment purposes. Only then should measures be developed to which rewards can be linked.

Related to these recommendations, Saskatchewan may want to consider ways that measurement and reporting on transformation efforts could be linked to evaluation efforts within each focus area, as well as overall. Currently, it is unclear whether or how measures will be developed, and how they will be used for reporting and/or evaluation purposes.

## *Evidence Statement 3: Consideration and acknowledgement of historical context will help avoid unnecessary pitfalls, and increase buy-in and support from system stakeholders.*

When asked whether this statement resonates with their own experience of large system transformation, 15 of 44 respondents (34%) reported that it did "very strongly," 19 (43%) said "to a large extent," 8 (18%) said "to some extent, but I can think of one example where this didn't explain the findings," and 2 (5%) said "not really, I can think of more than one example where this didn't explain the findings."

**Figure 4: Consensus Network responses to Evidence Statement 3**



This evidence statement had the highest number of respondents replying that it resonated with their experience and knowledge “to some extent” or “not really”. While history was widely acknowledged as being an important factor to consider when undertaking transformative initiatives, it was noted that history should not be considered as a determining factor. Several Consensus Network respondents commented that many previous change efforts have been unsuccessful, and have actually served as barriers to future change efforts. One suggested that organizations should not be “distracted by the previous attempts at change;” another recommended that past efforts should be used as only “one of many information/intelligence gathering sources.”

On the other hand, there was a concern voiced that deliberate avoidance of historical analysis could set a transformative effort up for failure. Strategic discussion, and if possible a plan, to deal with any similar or identical problems that might arise again could be a critical factor in the success of a current effort. However, this requires frankness, honesty and as much independence as possible as the discussion may not reflect all those involved in the most flattering light. One respondent noted that "Vested interest is commonly a major factor influencing success or failure in LST as with many other policy initiatives" and as such, may require leadership to identify those vested interests and move forward in the absence of a consensus.

## Contextual Factors

Several **contextual factors** were identified in the literature as being particularly important to support accomplishment of consideration and acknowledgement of historical context as described above. They are presented here in the order of importance as identified by the Consensus Network (see methods), with those factors with the highest number of respondents indicating they were either "very important" or "extremely important" listed first. There was almost no difference in the number of Network participants indicating these two factors were very or extremely important.

1. Interest and awareness on the part of change leaders with respect to the history of past change efforts (84% agreement)

2. Existence and availability of historical accounts, both personal and documentary, of past systems change initiatives (Harrison & Kimani, 2009) (82% agreement)

## Mechanisms

In addition, several mechanisms for change were identified in the literature as being important to support accomplishment of consideration and acknowledgement of historical context as described above. Similar to the contextual factors, the mechanisms are presented here in order of their average score of importance as rated by the Consensus Network. It should be noted that there was very little variation in the number of respondents endorsing each mechanism as being "very important" or "extremely important" with respect to Evidence Statement 3.

1. Explicit attention to and acknowledgement of past change efforts and outcomes in the internal and external framing of current change efforts (Harrison & Kimani, 2009) (80% agreement).
   In their review of system redesign at Denver Health, Harrison & Kimani concluded that

"grounding the redesign's vision and change strategy in familiar ideas and activities reduced the likelihood of resistance by stakeholders loyal to DH's past" (2009, p. 46). In addition, they concluded that "system changes are more likely to succeed when they are mutually reinforcing and well aligned with pre-existing system features" (2009, p. 52). For more on the Denver Health example, see the Mini-case study in Appendix C.

The consensus network respondents agreed that this mechanism is important, acknowledging its power to affect outcomes both positively and negatively. One CN respondent agreed, suggesting that "we need to frame the translational change proposition as an extension of what we do already ("a bridge from the present") if we want people to buy into it." Another respondent pointed to the example of EMR in the health system, observing that "professionals and front-line workers … are usually very influenced by their past experiences of reforms or attempts to implement innovations in the system . . . The numerous implementation failures [of EMR] in many provinces seem to impact [our] current ability to design and implement the change." In general, awareness of past efforts can influence whether current change efforts are framed as a continuation of, or departure from, the past. This, in turn, can influence the success of the current change activities.

2. Education of key leadership throughout the system of previous change efforts and their outcomes, contextual factors and mechanisms that were influential in past efforts for change, and the relationships between past efforts and current efforts. (76% agreement)
   Many comments from the consensus network focused on the need to study and learn from past change efforts. As one person said, "this won't give you a formula for success, but it will give you lessons about how to proceed in your specific current context." Another noted that "qualitative research … is particularly useful to understand the underlying reasons why it worked or didn't – so as to avoid similar pitfalls or look for similar opportunities." Yet only seven of the respondents (of 45) reported that this mechanism was "extremely important" whereas 14 said that the first mechanism listed under this evidence statement was "extremely important."

## Recommendations for government action

Based on a comparison of the evidence from the literature with current practice in Saskatchewan, as well as comments received from the Consensus Network and Learning Forum, recommendations have emerged regarding potential government action that could support, enhance, and facilitate efforts to achieve consideration and acknowledgement of historical context. The full set of comments from the Consensus Network survey is available as Appendix D, and are grouped and summarized here.

- Carefully assess organizational readiness for transformation and develop resources, system capabilities, and external relations capable of supporting proposed changes. System resources and capabilities should be developed sequentially over time (Harrison & Kimani, 2009).

- Store and report information about past change efforts, including (and especially?) efforts that were unsuccessful.

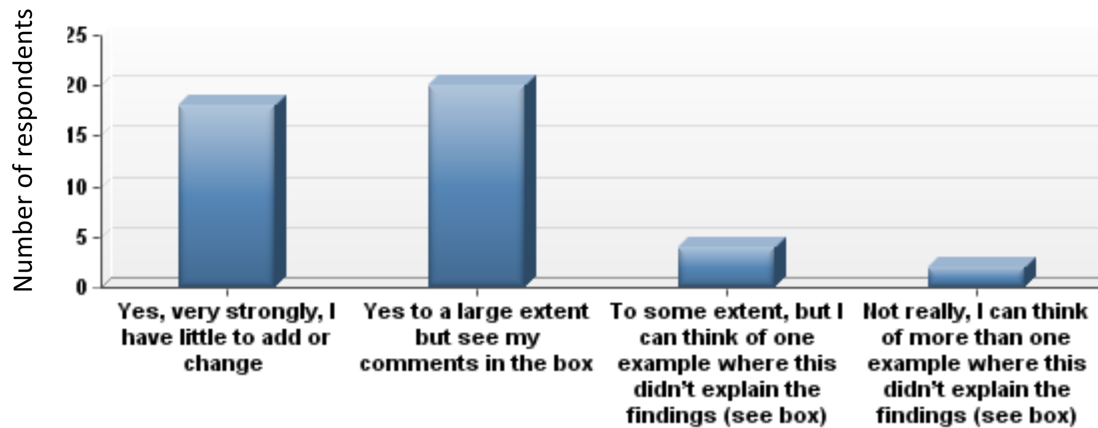
    - Provide guidance, funding, and technical assistance to facilitate organizations' efforts to document and report on historical activities, including the commission of evaluations. Establish formal (normative) recognition of the importance of these reports. Requiring a process for learning and reflection for current change efforts would be useful to support documentation of those reflections for the future. Requiring a synthesis of past efforts in the planning process of any current change initiative would assist with the adoption of a culture that values experience and actively seeks to learn from it. It would also make such efforts a priority for policy makers who have very limited time and resources.
    - Provide storage for and access to historical knowledge, especially qualitative assessments. Include contact names for key personnel in transformation efforts for consultation later.
    - Gather historical narratives from other sources (contexts) for reference, and develop syntheses or briefs on the current and historical examples of change that are relevant and framed for an audience of political decision-makers. One respondent suggested that this be done by external experts, and to have it be forcefully presented, which will help ensure that the review of the relevant past is not "coloured by the prevailing party line."
    - Provide a forum for sharing information and lessons learned across jurisdictions (provinces).
- Recognize that while history is important, its lessons should be used to inform moving things forward rather than as an excuse to delay taking action. Include in any synthesis of past efforts an analysis of the relevance of each to the current context. Technology, ideology, and environment may have all changed in the interim and must be taken into consideration when assessing how past efforts can be used to plan for current ones.

Related to these recommendations, Saskatchewan may want to commit resources to capturing the stories of the current transformation efforts in order to both inform future efforts, and as part of the data collection process for evaluation of the current initiatives. So few examples exist of detailed accounts of "how" transformation efforts are accomplished; this could be a significant contribution of Saskatchewan to the field and to organizations, systems, and change leaders interested in following their lead.

## *Evidence Statement 4: Large system transformation in health care systems relies on significant physician engagement in the change process*

When asked whether this statement resonates with their own experience of large system transformation, 18 of 44 respondents (41%) reported that it did "very strongly" (the highest percentage of all of the evidence statements); 20 (45%) said "to a large extent," 4 (9%) said "to some extent, but I can think of one example where this didn't explain the findings," and 2 (5%) said "not really, I can think of more than one example where this didn't explain the findings."

**Figure 5: Consensus Network responses to Evidence Statement 4**




Based on the evidence presented in the literature (as well as on experience of the research team and expert panel), physicians were highlighted in this evidence statement due to several factors. First, transformative initiatives have often been endorsed and championed by care providers within the health care system that had less power/were operating more on the periphery of the system. Nurses are a good example as being typically very supportive of change efforts. This is largely due to the more subordinate relationship between the nursing profession and health system management, with the former being almost exclusively salaried public employees. Second, many physicians have historically (and do currently in Saskatchewan) operate as independent, fee-for-service contractors, with a collegial regulatory framework, focused more on disciplining extraordinary incompetence or unethical behavior than on monitoring quality. This provides them with a great deal of power and autonomy when formulating a response to transformative efforts. Historically, in many health systems, physicians have been the key players in either mounting resistance to change efforts or in supporting successful transformative efforts, where physician champions take a lead role. This has led many experts to point to physician engagement as a critical element for change efforts to be successful.

While the evidence provides a strong rationale for focusing on physicians, there was a strong reaction from the Consensus Network respondents to this focus. Many pointed out that while physicians are important to engage, the support and engagement of other health professionals is also critical. There seemed to be a general consensus among respondents that engaging physicians (many of them) in change efforts *with* other health professionals (who are likely to be already more disposed to supporting the efforts) is the key element. One example of this is the engagement of multiple types of clinicians by Trinity Health in their development and implementation of an electronic health record, which included daylong working sessions 15 months before the EHR was released; meetings of nurses, therapists, nurse managers, pharmacists, and registration staff with the IT analyst, the hospital's implementation team, and the clnical transformation director to review a patient-centred work flow; and monitoring of implementation. All hospitals released full-time staff from some clinical duties and assigned extra hours

to part-time staff or temporary staff to ensure adequate engagement (Brokel & Harrison, 2009). Physicians cannot be focused on to the exclusion of other types of professionals, but they must be engaged and physician leaders and champions must be developed and mentored. Because of their historical reluctance to engage in and be supportive of change efforts, the evidence statement highlights their importance. Recommendations below emphasize how government might focus their efforts on this engagement and leadership development process.

One Learning Forum participant shared the following example: "Without a doubt, the need for clinician engagement is paramount although on its own may not be sufficient. Hence the importance within [our project] of what is called the 'compact' between clinicians and managers, which endeavours to make explicit the social (or psychological) contract between these groups. The compact lists the gives and gets in order to clarify the terms of the contract. Clinicians remain perhaps the most powerful group of stakeholders in the NHS since they can either block change or give it their blessing. We can point to examples where clinicians have driven change and others where clinicians have worked in partnership with others to effect change. Clinicians and managers have sometimes expressed opposition to [our transformative efforts]. Nurses have tended to be the most favourably disposed towards [our efforts] and the changes in working practice and behaviour that flow from it. This may reflect their tendency to be more corporate in their approach and, in contrast to clinicians, less individually autonomous."

One Consensus Network respondent reminded the research team that several key reform efforts (including the introduction of diagnosis related groups (DRGs), the elimination of user fees following the Canada Health Act, Medicare, and the Canada Health Act itself) were implemented despite physician opposition. So while it will always improve a change effort's chances of success to have physicians engaged and supportive of the transformation being sought, it is not always necessary (or possible) to have physician support for a particular change effort.

## Contextual Factors

Several **contextual factors** were identified in the literature as being particularly important to support accomplishment of physician engagement in health system transformation as described above. They are presented here in the order of importance as identified by the Consensus Network (see methods), with those factors with the highest number of respondents indicating they were either "very important" or "extremely important" listed first.

1. Relationship of physicians to other care providers institutionally, historically, politically, and individually (Kirkpatrick, et al., 2009; McDonald, et al., 2008) (93% agreement)

2. Relationship between and among such physician organizations, health care systems, and governmental agencies (Hasselbladh & Bejerot, 2007) (91% agreement)

   The contextual relationships between these various groups can lead to strategic alliances with some over others. As one Consensus Network respondent remarked, "experience says engage local physician leaders, not their political vested interest groups. Physician lobbies are not focused on pragmatic problem-solving."

3. History of previous attempts to effect change and physician response to those attempts (Kirkpatrick, et al., 2009) (80% agreement)

   This is also related to Evidence Statement #3 on the history of past efforts (above).

4. Strong licensing and regulatory bodies (e.g. Colleges of Physicians) that have responsibility for monitoring quality, enacting disciplinary measures and certifying competence (Grol, 2006) (64% agreement)

   While there was general agreement that engagement with bodies that have authority over physicians is important, there were many detractors from this contextual factor. Most respondents reacted to its exclusive focus on regulation and licensing to the exclusion of other associations. For example, “I am not sure that physicians in charge of regulation and licensing are the best -- because their emphasis (appropriately) is on dealing with substandard, incompetent and dangerous care. I believe that local clinical leadership is essential for transforming/improving care where issues of competency are not the central question.” Another respondent reminded the team that medical and professional associations (e.g., ACP) are equally important, especially when it comes to physician perception of the action as “policing” rather than “integrating best practices as part of an overall effort to improve professional practice.” Finally, one respondent suggested that “sometimes strong regulation, quality assurance and incentives work contrary what is hoped for since the system becomes too 'formal' [with] too much reporting, calculation, etc.”

## Mechanisms

In addition, several mechanisms for change were identified in the literature as being important to support accomplishment of physician engagement in health system transformation as described above. Similar to the contextual factors, the mechanisms are presented here in order of their average score of importance as rated by the Consensus Network. Many more respondents endorsed the first mechanism as being “very important” or “extremely important” than endorsed the final mechanism with respect to Evidence Statement 4.

1. Implementation of a quality assurance framework, that monitors key quality indicators and is linked to incentives, professional development and re-certification, and ultimately, disciplinary measures (Crampton & Starfield, 2004; Sibthorpe, 2005) (91% agreement)

   This is also related to Evidence Statement 2 on measuring and reporting outcomes (above).

2. Changing incentive structures - e.g., moving from exclusive fee-for-service to mixed remuneration models, including capitation, salaried and pay-for-performance (81% agreement)

Many of the Consensus Network participants agreed with this mechanism as being particularly important to engaging physicians in transformation efforts. Two examples of quotes that capture the general sentiments expressed include:

"I think incentives have to match the desired behaviour, so I think there needs to be changes made to incentives, such as fee for service, that reward activity and not necessarily outcomes. However, I think physicians and others need to be actively engaged in the process of examining incentives. In the past, any mention of removing "fee for service" has become the elephant on the table and there couldn't be real discussions about what we are trying to accomplish and how we might get there. Fee for service might work if we had clear accountability agreements and other ways of clarifying performance expectations."

"In my experience physicians are not leaders of change (and I am a physician) and more usually they follow on if the incentives and conditions are right and they can be patted on the back and bask in the glory of a new dawn. Smart political ways are needed to keep this lot on side and to stop them manning the barricades and pleading in the media about the erosion of patient-doctor relationships."

3. A dedicated change manager/facilitator role in the process (Chreim, et al., 2010) (77% agreement)

   There were some mixed comments with respect to this mechanism. In general, most respondents agreed with it, but there were varying perspectives on what the change manager or facilitator role should look like, and who should be installed in that role. "In my experience, engaging physicians in changes that affect them (and transformational efforts in health care invariably will affect physicians) is very important. What I would add to your statements above is that it is important for change agents to identify physicians who support the transformational effort and who are credible. These physicians should be invited to join the change agent team."

   Conversely, "It is fashionable to have a change manager for every project but I am not sure that this is necessary and can impede clinician behaviour change if that person is not a clinician. . . . Staff should be learning to make change in their everyday work without waiting for someone else to be in post to organise them."

4. Critical engagement of physician leaders and colleges/associations in all aspects of the change process (Chreim, et al., 2010; Kirkpatrick, et al., 2009) (70% agreement)

   "The best mechanism to generate engagement of physicians is through other physicians. While the respective colleges are important for credibility of the message, it is individual physicians talking directly to their colleagues that will make the difference."

   "It is also important to identify physician champions, who can co-lead the changes with their colleagues, or provide examples of what can be accomplished."

## Recommendations for government action

Based on a comparison of the evidence from the literature with current practice in Saskatchewan, as well as comments received from the Consensus Network and Learning Forum, recommendations have emerged regarding potential government action that could support, enhance, and facilitate efforts to achieve physician (and other types of clinicians) engagement in health care system transformation. The full set of comments from the Consensus Network survey is available as Appendix D, and are grouped and summarized here.

- Work with educational institutions to modify initial and continuing training curricula to provide skills and roles that are consistent with transformational efforts.
  - Work with medical schools to train doctors to work as team members in a complex organizational and political context.
  - Include training on interprofessional collaboration (IPC) in medical schools and later continuing education
  - Invest in training physician leaders/managers/facilitators. Give physician leaders authority, accountability, and remuneration for these tasks.
- Engage physicians in policy development in a sustained, real, and ongoing way by soliciting physician input on all initiatives. (In the UK, national clinical directors have been an important link between the field and policy development.)
  - Engagement at both a high level and locally is necessary
  - Establish government-supported cross-organization initiatives (advisory boards, etc.) with a mandate to develop national guidance.
  - Encourage collaborative partnerships; re-align incentives to fit with expected behaviour changes or desired outcomes.
  - Work with the equivalent physician institutional body for the physicians (i.e., the medical colleges).
  - Serve as a convening body across different levers on physician engagement.
  - Recognize that engagement may be difficult due to physician perception that they have not had opportunities for involvement in change efforts in the past. “Change does not have to be rooted in confrontation or coercion, but confrontation and coercion may be necessary to unblock channels of change.” (CN)
- Provide funding, regulations, and incentives for physician engagement

- Negotiate with physicians, change incentive systems for physicians (with their input and partnership), and provide resources for physicians to take part in the change process. Alberta has had some success with this approach.

- Implement payment options while facilitating evaluation and modification of those options to account for lessons learned.

- Be cautious about implementing incentives or pay for performance initiatives; there are other ways of valuing work done. However, one respondent noted that U.K. attempts to alter primary care to be more evidence based and efficient have been sabotaged by failure to provide adequate incentives to create real change.

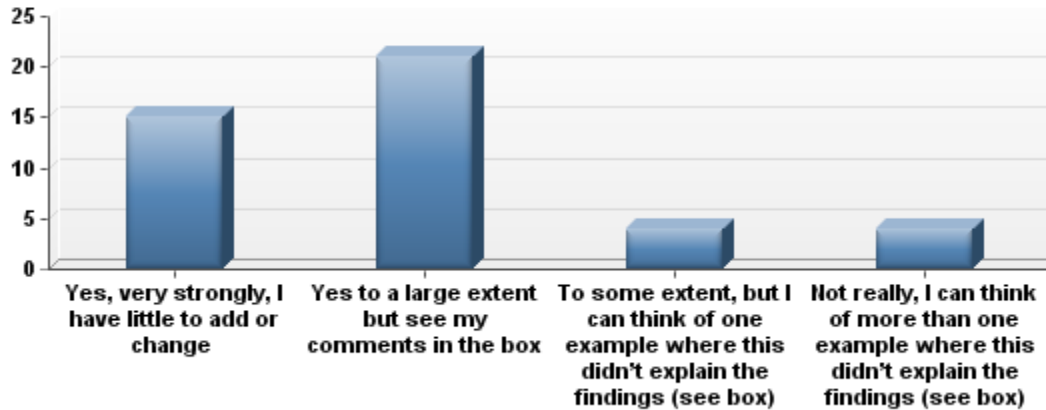
- Ensure financial incentives are aligned with the change agenda.

Based on these recommendations, Saskatchewan may want to invest more in educational initiatives for physicians, both for newly trained physicians as well as continuing education. It is unclear to the authors what the existing capacity for producing physician leaders in health system transformation is in Saskatchewan, or how this compares to other locations. Investing in the development and training of physician leaders may be one of the most promising avenues to explore regarding this evidence statement.

## *Evidence Statement 5: Large system transformation that aims to increase patient-centredness requires significant engagement of patients and families in the change process*

When asked whether this statement resonates with their own experience of large system transformation, 15 of 44 respondents (34%) reported that it did "very strongly," 21 (48%) said "to a large extent," 4 (9%) said "to some extent, but I can think of one example where this didn't explain the findings," and 4 (9%) said "not really, I can think of more than one example where this didn't explain the findings."

**Figure 6: Consensus Network responses to Evidence Statement 5**




> *'Patients and citizens more generally are the intended beneficiaries of health care systems and must therefore be seen as the primary stakeholders. This is crucial in order to understand the real needs of people from their own perspectives, as well as recognising that their support is essential to the maintenance of health care systems'* (Thompson, 2003/4).

There is a great deal of literature that discusses patient-centred care, ranging from definitions of engaged patients and families in the health care decision making process, to frameworks that involve patients in the planning and implementation of transformative efforts. Of note, Saskatchewan Health conducted the Patient First Review (Dagnone, 2009a, 2009b) which focused on the issues of patient-centredness and patient engagement, and has served as the foundation for Saskatchewan's work in this area.

A high performing health system has a collective understanding of patient-family centred care (Stewart, 2001). The term 'patient and family centred care' acknowledges that families are essential to patients' health and wellbeing, requiring a collective understanding of its meaning and implications for engagement (Conway, et al., 2006). The collective term 'patient and family centred care' needs to have a common understanding/language for healthcare providers, patients and families. This needs to be measurable and responsive to enhance the patient experience. There are a multitude of factors to ensure that patient-family centred care is integral to the healthcare system.

At an individual level the patients' voice comes from both individuals as consumers with family/community support and patients as taxpayers contributing to a health care system. This collective patient voice is a source of evidence. The culture of the health care system and value it places on patient voice can determine how this qualitative evidence is integrated with different forms of evidence that are from a quantitative perspective (Mitton, et al., 2009). The regular collection of information from patients can be coordinated e.g. through pay-for-performance incentives in relation to

physician conducting patient surveys and acting on patient feedback (Davis, et al., 2005). At a collective level patient/community involvement can support the health care policy planning and the development of services.

Enhancing patient and family centred care is dependent on the personal capacity of the individuals through their skills, resources and confidence to access information and also through the opportunities the health care system provides (Thompson, 2003/4). Control and power issues in relation to healthcare provider and patient experience can undervalue the patient voice (Ball, 2010). Outcomes show taking more account of the users of services delivers improvement in care deliver, increase health literacy and provide valuable feedback and assistance in setting priorities (Blunt, et al., 2009). This is accompanied by leading to more appropriate and cost effective use of health services and better health outcomes (Coulter, 2005).

An overarching framework for patient involvement in decision-making and planning for the health care system provides a structured approach. For this to happen there needs to be a level of engagement from healthcare providers throughout the system (for more on provider engagement, see Evidence Statement 4 above). The incorporation of partnerships to enhance close working with patients is ideal throughout the organisation (Blunt, et al., 2009). Different engagement approaches need to be adapted for different communities and use a range of techniques to engage (Chessie, 2009). A concern for equity and inclusiveness to ensure vulnerable groups who have the most healthcare needs have a service that is receptive to their needs (Chessie, 2009; Thompson, 2003/4). The ability to seek on-going, sustained engagement appears to provide enhance outcomes compared to one-off sessions (Mitton, et al., 2009). Guidance on appropriate representation should outline the role and involvement of patient representatives in the decision-making process.

The focus of the framework should be on developing core competencies for patient-centred care. For this to happen there needs to be an agreement of what constitutes patient-centred care. Lewis in 2008 identified eleven elements that define patient-centred care, which include timelines, coordination of care and respect (Ball, 2010). Saskatchewan has identified four core concepts of dignity and respect, information sharing, participation and collaboration (Saskatchewan briefing document on patient and family centred care, see Appendix A). There needs to be a shared agreement and adopting of these core concepts which can then be put into context for specific practices for implementation e.g. practitioners (Audet, Davis, & Schoenbaum, 2006).

Communication is a core principle of patient-centred care (Bauman, et al., 2003). Methods of providing information to support choice need to be clear to enable patients to easily interpret. However without appropriate recording systems in place, it can be difficult to extract the appropriate information for patient use (Lewis, 2005). Fraenkel (2007) also identified that there should be a focus on clear provider-patient communication and it should be recognised that providing information is not sufficient to becoming an informed patient.

## Caveats from the Experts

While there was strong endorsement of this evidence statement, it also produced the largest number of qualifying statements and comments from the Consensus Network. In general, there was agreement that focusing on patient-centredness is a critical element in the transformation of health care systems, but several also noted that it would be very difficult to disagree with the statement as it is currently phrased. In particular, many respondents pointed to the lack of specificity of both the evidence statement and supportive contextual factors and mechanisms. The lack of definitions of “significant engagement,” “patient” and “family” were noted as problematic. Some questioned the intent of the statement – whether it is designed to allow for patients to request (or demand) inappropriate or dangerous care? The balance of decision-making power is not currently addressed. Also, the degree, timing, and intent of patient involvement in health care decisions is not addressed in the evidence statement or supporting elements. Many respondents pointed out that “patient-centred care” is a popular concept, but noted that the reality of making it happen is much more difficult to achieve. No respondents could name a single example of a successful effort to truly engage patients in decision-making at a system-wide level. Some remarked that it may not be something patients really want: “I remain unconvinced that all patients want (or always want) to be heavily involved in change processes. It is fashionable to assume so but it has proved extraordinarily difficult to achieve effectively and fairly in practice . . . For much acute care, patients just trust their professional caregivers to get on with the job.” Still others are committed to the ideal that a system would be “owned by, co-created with, and responsive to the community in which it operates. The public are central, informed, valued and active participants. They have the information and tools they need to pursue wellness and are given permission and opportunity to ask questions.” In a truly patient-centred care system, both perspectives would be honored. Yet there were few suggestions for HOW to achieve this.

## Contextual Factors

Several **contextual factors** were identified in the literature as being particularly important to support patient engagement in health care transformation as described above. They are presented here in the order of importance as identified by the Consensus Network (see methods), with those factors with the highest number of respondents indicating they were either "very important" or "extremely important" listed first.

1. Existence of processes to engage patients and their representatives in feedback and decision making throughout the system (Bauman, et al., 2003; Blunt, et al., 2009; Davis, et al., 2005; Fraenkel & McGraw, 2007) (87% agreement)

   Either at a collective level or an individual level, Consensus Network respondents pointed out that this will require time, staffing, and resources. " Patients need to be treated as equals, and will need pre training, pre briefs to be able to engage on an equal footing. Clinicians can find engaging patients in this way challenging so also need training and development to help them."

2. Historical role of patients in health care system decision-making and change efforts, including the culture of the health care system and the value it places on patient voice (67% agreement)

While the majority of respondents thought this factor was "very" or "extremely important," there were many who expressed scepticism based on past history with such efforts. For many respondents, past efforts have only paid "lip service" to true patient involvement. As one respondent commented, "I don't have any experience of successful change processes to increase patient centredness. This may reflect my ignorance - but maybe it points to the validity of your model since the contextual factors & mechanisms are problematic in terms of meaningful patient/community involvement and success of previous attempts."

3. Success of previous attempts to increase patient-centredness (and their perceived success) (64% agreement). While there are numerous examples of individual organizations successfully incorporating patients and families into decision making processes and strategic planning (see case studies), there were many Network respondents who mentioned that they knew of no successful large system transformation efforts that truly increased patient-centredness. Reliance on previous models "may be decision traps which prevent action and change, not encourage it." (CN)

## Mechanisms

In addition, several mechanisms for change were identified in the literature as being important to support accomplishment of a patient-centred focus as described above. Similar to the contextual factors, the mechanisms are presented here in order of their average score of importance as rated by the Consensus Network. It should be noted that there was very little variation in the number of respondents endorsing each mechanism as being "very important" or "extremely important" with respect to Evidence Statement 5.

1. On-going, sustained engagement with patients (and families) for continuity (Mitton, et al., 2009) (82% agreement)

   While there was strong agreement that this mechanism is very or extremely important, several respondents commented that it is very difficult to do well, and that there are very few examples where it has been achieved (and none at a systems-wide level).

2. Ensuring alignment with measurement and reporting mechanisms to ensure information for patient/communities is clear (Thompson, 2003/4) (84% agreement)

   Consensus Network respondents agreed with the importance of reporting and providing feedback to patients, but several noted that reporting alone is not sufficient, and must take into account the audience to whom the information is being reported. "From my experience, the reporting mechanisms must be respectful of all participants. I have found that a combination of charts/pictures and lay language is helpful if the patient/community is to understand the language of the health care system. An example of this recently was went I returned data to the communities and they indicated that they would like charts/pictures and stories about what the data meant specifically from those that participated in the community-based participatory

research project." Another respondent clarified the distinction between reporting and true engagement: "Making sure reports are clear would seem to be a mechanism that is unlikely to yield substantial patient engagement. Engagement is about hearing the patients/communities rather than reporting to them."

3. Patient/community involvement in planning and developing of services (82% agreement) (Chessie, 2009; Thompson, 2003/4)

   Many respondents commented on the lack of clear definitions of the terms in this mechanism. As one noted, "For me, transformational change in healthcare is not about mechanisms, but about the whole philosophy of change. It is fundamentally about shifting power from a model of "power over" patients to a model of "power with". It isn't about "voice" it is about power. A lot of the aspects that you suggest are just mechanisms to give lip service to patients without changing the dynamics of the system." Another reminded the research team that there are many ways to incorporate patient views and "involve" patients in ways that appear to be successful: "I have studied organisations in the US that had never ever held a patient focus group but were nonetheless high performers on patient-centred care as assessed by the survey feedback. So these organisations must have been responding implicitly to day to day encounters with all patients rather than in specific managed initiatives."

4. Explicit value placed on equity (representation of traditionally under-represented groups, deliberate inclusion of patient voices that are typically or historically silent in decision-making processes) (78% agreement) (Chessie, 2009; Thompson, 2003/4)

   The issue of Aboriginal involvement in transformation efforts was a consistent theme throughout the Consensus Network comments. Within this mechanism it is called out explicitly. One Network respondent nicely summarized the views of several with the recommendation that "Consultation and inclusion of Aboriginal people beyond the commonly accepted 'stakeholder approach' is required."

Based on the relative ordering, we might infer that while patient/community involvement in planning and developing of services is important, it is not sufficient to merely "involve" patients in planning, but rather that involvement should be sustained and ongoing, and should involve representation of traditionally under-represented groups in the process.

The Saskatchewan Lean initiative has an explicit focus on the patient as the consumer of healthcare. This is consistent with much of the Lean literature, where "value" and "waste" are defined by the perceptions and experiences of patients (*Going Lean in Health Care*, 2005). However, very little of the Lean efforts that Saskatchewan has engaged in to date have involved patients, or been focused on the areas of health care practice that impact patients directly. Very little in the Lean literature discusses how to involve patients in Lean processes; all of the work reviewed for this report involved staff taking the *perspective* of patients, but we want to highlight that that may be very different than actually involving patients in the change process itself. While minutes waiting in line may be reduced, that may not be the

most important element of the patient's experience with the health care system. More emphasis needs to be placed on ensuring that the patient's "perspective" is actually reflective of patients' views, either by involving patients in the process, or by evaluating the impact of changes on patients in a robust way.

From the perspective of the individual patient being engaged in setting the direction of his or her own healthcare decisions, there was little in the literature that suggested HOW to change this other than the suggestion of conducting patient satisfaction surveys. Clearly, changing the culture of the clinical encounter must also involve care providers and changing health care system norms regarding the amount of patient input and guidance that is actively sought during clinical encounters. However there was very little presented in the literature that spoke to strategic actions that might increase the demand for engagement on the part of patients. The one exception identified by the Consensus Network was the Enhancing Wellness Model which was developed for engaging individuals in the development of a personal health promotion program (Ramsden, 2004). In addition, the question of how much of patient engagement is the responsibility of patients remains unanswered. Most of the comments from the Consensus Network focused on engaging the collective patient voice in planning, decision-making, and feedback; perhaps it is through engagement of the collective voice that mechanisms for enhancing the perceived value and presence of the individual patient voice can be incorporated into day-to-day operations of the health care system and of individual clinical encounters.

## Recommendations for government action

Based on a comparison of the evidence from the literature with current practice in Saskatchewan, as well as comments received from the Consensus Network and Learning Forum, recommendations have emerged regarding potential government action that could support, enhance, and facilitate efforts to achieve real and sustained patient engagement in health care system transformation. The full set of comments from the Consensus Network survey is available as Appendix D, and are grouped and summarized here.

- Set up independent governance and advisory mechanisms for health care institutions and bodies at the provincial, regional, and local levels. Working within the existing framework of the Health Quality Council in Saskatchewan might be a fruitful avenue for Saskatchewan to explore, as it already routinely uses advisory groups to ensure local acceptance of any proposed indicators (Chan, Smadu, & McMillan, 2006).
    - Create (or fund the creation) of a coordinating body independent of both government and stakeholders designed to engage citizens
    - Ensure that patient groups are fully involved and represented in consultation on the need for change and in governance of the change process. This could include public involvement on the agency's board to ensure public engagement on all initiatives, and/or mandating a percentage for patient/family participation on key committees/boards.

- Ensure the right players are involved in the change process
    - Provide adequate funding for patient and family participation, including travel, per diems, etc. This will help ensure equity in participation.
    - Help prepare patients (and families) for active involvement in improving care. Working with organizations such as the Patients' Association of Canada may be useful in this respect. Supporting the work of such organizations will be important to help an organized patient voice to grow. Another suggestion is a major independent and sustained public education campaign about what it means to be involved in patient care or in change efforts.
    - Engage Aboriginal leadership and Aboriginal health agencies in the change efforts.
    - Involve and support professionals who have community engagement/development experience
    - Examine the stakeholder consultation exercises run by UK NICE as a good model to follow
- Collect information on what patients really need
    - Conduct evidence-based surveys that go far beyond the patient satisfaction surveys currently being done. Results must be integrated into evidence-informed programs (action research).
    - Avoid the reduction of true patient engagement to patient satisfaction surveys (the UK experience regarding the effort to bring the patient perspective to bear on NHS service evaluation and reform was mentioned in this context)
    - Design information collection around strengths rather than deficits.

Saskatchewan is clearly committed to placing the patient and family at the heart of their transformation efforts, as evidenced by their explicit identification of their Patient & Family Centred Care initiative as the umbrella under which the other three initiatives are evolving and in support of. While patient advisory groups are already in place in many settings, there are others (e.g. Lean initiatives) where patients have not been involved at all up to this point. For Saskatchewan to achieve a culture shift where patient views, values, and perspectives are integrated into every aspect of care delivery and planning, a first step needs to be incorporating actual patients and families into the planning and implementation stages of each of the initiatives in a meaningful and sustained way. This will take significant political will as well as financial and human resources. We did not find much in the way of evidence for how to incorporate the individual patient voice into clinical encounters; it may be that involving more of the collective patient and family voice will lead to innovative approaches to engage individual patients within clinical encounters.

## Discussion

This report was produced using an innovative methodology (a modified realist review) to review existing evidence on large system transformation in a health care setting using both published and grey literature. Major themes have been distilled and validated by an international panel of experts. Based on a comparison of the evidence to current strategies employed by Saskatchewan, the findings from the literature review, and guidance from external experts, we have made recommendations with respect to specific actions government (specifically the Saskatchewan Ministry of Health) could do to create, support, and sustain transformative change in the health care system for Saskatchewan.

As a whole, the five evidence statements do not present strategic directions that are particularly novel or groundbreaking. Given sufficient time, they are similar to what a group of engaged, intelligent individuals committed to systems change work could develop without an extensive review of the literature. This is reassuring, since it suggests that the work of large system transformation is well within the grasp of those doing the work. It also goes one step beyond what most of the existing evidence presents, and provides explicit recommendations for strategies to advance change in Saskatchewan.

One major contribution of this review then is to present in one document the full range of factors that need to be incorporated in a comprehensive, integrated strategy that unites contributions across multiple levels and stakeholders. Integrated strategy will serve to address significant limitations to current initiatives by bridging across structural silos, thus enhancing the likelihood of critical culture change and more efficient use of resources.

What this report adds to what has been done previously, is the addition of personal experiences and advice from those currently or recently actively engaged in systems change work. By tapping the personal and tacit knowledge of those "on the ground" transformation leaders, previously unpublished insights into the nuances and political intricacies of *how* the work gets done have been captured and are presented here in ways that may make it easier for Saskatchewan to avoid the pitfalls that others have fallen into, and to more effectively capitalize on previous successes. In addition, the recommendations are presented with full acknowledgement that strategies will need to be undertaken within a specific political and historical context, rather than as a "one-size-fits-all" recipe.

The next step is for Saskatchewan to take what has been presented here, and to develop an action plan that marries the proposed actions and mechanisms that have shown to be effective (or influential) in other contexts with the realities and specificities of the Saskatchewan context. In particular, it will be important to examine how each set of recommendations might be applied to all four current transformative initiatives in ways that leverage resources and learnings, and can allow for synergies to be developed that can maximize the impact of their efforts.

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## Appendices

***Appendix A - Case Briefings***

***Appendix B - Search concepts and search terms***

***Appendix C - Mini case-studies***

***Appendix D - Results from the Consensus Network survey***

***Appendix E -Learning Forum Members***